

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, JULY 17, 1880.

ORIGINAL COMMUNICATIONS.

SUCCESSFUL AMPUTATION AT THE HIP-JOINT FOR SARCOMA OF THE THIGH.

Read before the Philadelphia Academy of Surgery, October 6, 1879,

BY S. D. GROSS, M.D.,

Professor of Surgery in the Jefferson Medical College.

THIS case was that of a clergyman, 47 years of age, a resident of Texas, who consulted me on the 8th of September last, on account of a diseased condition of the right thigh. He first noticed in 1867 a little tumor about the size of a nutmeg on the inner part of the limb. The tumor gradually increased in size, and when removed in 1871 it weighed one pound and a quarter and was pronounced by the operator to be of a fatty nature. The wound soon healed, and the gentleman returned to his accustomed occupation as a preacher. A new growth, however, before long appeared in the line of the cicatrix, and in the latter part of the same year another operation became necessary. Nothing further was done in the way of surgical interference until April, 1878, when another growth of considerable size was removed, intermixed with a large quantity of clotted blood, and having, like the preceding ones, the appearance of a mass of fat. A fourth operation was performed in the latter part of November of the same year. During the present year four more excisions have been performed,—one in the early part of February, the second on the 29th of March, the third on the 18th of June, and the last on the 5th of August. It will thus be perceived that there were altogether eight operations performed. During the last twelve months the recurrence of disease was rapid, although the wound always healed very kindly. Much coagulated blood was present in the more recent growths, and, what is remarkable, the more solid portions of them had always the appearance of ordinary fatty tumors. Another singular feature of these growths was the entire absence of pain until a very recent period. Of late there was a good deal of aching in the limb, especially after travelling in a railway-car, but the local suffering was

never severe. When the patient arrived in this city the thigh was much enlarged and ulcerated at several points; there was a good deal of thin, sanguinolent discharge, and the limb was so stiff as to render it impossible to extend it.

The general health was good, but there was with a small and frequent pulse great emaciation, and anodynes were required to procure sleep and rest. The appetite was also considerably impaired. As there was no constitutional involvement, so far as could be determined by a careful exploration of the chest and abdomen, nor any enlargement of the lymphatic glands of the groin, it was deemed best to afford the patient a chance for his life by removal of the limb at the hip-joint. After a thorough rest of twelve days, during which the patient was fed upon milk-punch, beef-tea, and other appropriate food, the operation was accordingly performed on the 20th of September, in the presence of Professor Acland, of Oxford, England, and of the pupils of the Jefferson Medical College, Drs. Brinton, Levis, and S. W. Gross kindly assisting.

The circulation in the limb, enveloped in Esmarch's bandage, so as to press out the blood, was controlled by the abdominal tourniquet originally employed in this operation by Professor Joseph Pancoast in 1860 in a case of amputation at the hip-joint at the Pennsylvania Hospital. The operation as performed by me on the 20th ultimo was, as some of you who were present on the occasion are aware, by cutaneous flaps taken from the inner and outer sides of the limb, the latter being by far the larger, as the disease had encroached less in that direction than in the other. As little muscular substance was left as possible. Only three arteries, in addition to the femoral, required to be ligated. After waiting fully one hour and a quarter, when all oozing of blood had ceased, the wound was loosely closed with four ordinary sutures and a long needle, the latter being inserted in such a manner as to approximate the deep portions of the flaps. A few narrow strips of adhesive plaster were applied to the upper part of the wound, the lower angle of which was left largely open to facilitate drainage. With a similar object in view, the most dependent portion of the outer flap was pierced by a free incision, and the opening thus

made traversed by a piece of tape. Two hours after the patient had been placed in bed, a slight hemorrhage occurred from a muscular branch of the upper and inner portion of the wound, requiring the removal of a few sutures and the long pin, the latter of which was not again inserted.

Hardly an ounce of blood was lost in the operation, which was well borne by the patient. The bladder had been well emptied previously, and forty drops of laudanum had been administered an hour before the operation. The patient vomited once from the effects of the ether shortly after the operation was over. As soon as the stomach was able to bear it, milk-punch was given in small quantities, repeated every ten minutes, and kept up during the night along with beef-essence. Black drop was also given to promote sleep, which soon became sound and refreshing. With the exception of the slight bleeding previously referred to, no untoward symptoms occurred after the operation. For the first thirty-six hours there was a free discharge of serosity, followed at the end of this time by tolerably free supuration, which has continued up to the present time, sixteen days since the amputation. The patient has suffered no pain in the stump, and only a few times was there any spasm. He has taken ten grains of quinine daily since the operation. The bowels move daily of their own accord, and his spirits have all along been excellent, encouraged as he has been by the conviction that he is going to recover. One of the main objects during the treatment has been the administration at short intervals of nutritious food and drink. Beef-tea and milk-punch are the articles that have been mainly relied upon, assisted since his appetite has returned by beefsteak. The quantity of whisky daily consumed has been, until within the last few days, an average of about twelve ounces.

October 14.—This morning, twenty-four days after the operation, the ligature on the femoral artery was found lying loose in the wound, no attempt having been made at any time to remove it lest hemorrhage should be provoked.

November 3.—The wound is now nearly healed. The man's appetite is good; he sleeps well, and is in excellent spirits. The pulse, however, is still too frequent, and the system refuses to accumulate fat.

After the removal of the limb a careful dissection of the thigh disclosed the existence of three separate and distinct tumors, each nearly of the volume of an ordinary fist, of a whitish appearance, and of a firm, dense consistence. The sectional surface exhibited a number of bloody points indicative of the presence of vessels. The tumors were non-encapsuled, and had evidently had their origin in the inter-muscular connective tissue, as the muscles and thigh-bone were perfectly sound. A microscopic examination showed that the morbid growths are spindle-celled sarcomata, or what Sir James Paget has described under the name of recurrent fibromas.

December 28.—The patient late in November was sent to the sea-side at Atlantic City for change of air and scene. He returned at the end of eight days much improved in every respect, and then spent three weeks very advantageously at Allentown. He is now in Maryland in the enjoyment of good health and spirits, and expects in a short time to return to his home in Texas. The stump is well shaped and free from pain, but there is still in the direction of the acetabulum a slight discharge of thick yellow matter.

June 24, 1880.—I saw my patient a fortnight ago, plump, fat, and in excellent health, having gained upwards of twenty pounds in weight. He has for several months past preached every Sunday, and on several occasions twice on the same day, without any unusual fatigue. The stump is well shaped and thoroughly cicatrized, except at a little point over the acetabulum, where there is still, at times, a very slight oozing. There is no appearance whatever of a recurrence of disease.

CASES OF DISLOCATION OF THE HEAD OF THE FEMUR.

BY JOHN H. PACKARD, M.D.,

Surgeon to the Episcopal Hospital.

Read before the Philadelphia Academy of Surgery, October 6, 1879.

DOUBLE DISLOCATION OF THE HIP.

A GERMAN, æt. 35, had a double dislocation, the head of one femur (the right) being luxated into the thyroid foramen, while the other was thrown on the dorsum ilii. The accident occurred by the falling of a house in the gale of October 23, 1878, the man being caught in

the doorway as he was escaping. When brought to the Episcopal Hospital, immediately afterwards, the nature of the lesion of the right hip was determined by the following signs:

The foot was somewhat everted, the leg semiflexed, and the head of the femur could be plainly felt near the median line, decidedly below the pubis. The amount of shortening was not noted, the other hip being also dislocated. Reduction was effected by Dr. Harvey, the resident surgeon, before Dr. Packard's visit; simple flexion and adduction, the knee being at the same time pushed downward, were sufficient.

Singularly enough, the lesion on the left side, which was clearly indicated by the usual signs, was not corrected until Dr. Packard arrived, when it yielded to the ordinary manipulation.

The case did perfectly well, the man being able to walk about in three or four days. He was, however, retained in the hospital for about six weeks, on account of a compound fracture of the right arm, and was then discharged cured.

SUPPOSED SCIATIC DISLOCATION OF THE FEMUR.

Dr. Packard also reported a case which had recently occurred to him in private practice, the diagnosis of which was not perfectly clear.

A boy, *æt.* 15 years, was playing on an embankment, when he fell about eight feet, sustaining, among other injuries, a lesion of the left hip. Dr. Packard saw him the next day, with Dr. Rickards, and found the foot everted, the limb shortened somewhat over an inch; a good deal of tenderness in the vicinity of the hip-joint. The fact that the boy was able to lift the knee, although slowly and with difficulty, led Dr. Packard to express the opinion that the lesion was a luxation, and not a fracture, the presumption on the ground of his age being, of course, also in favor of this view.

Either was given, and the ordinary manipulations of "Reid's method" carried out, when the head of the bone went into the socket with an audible snap *during abduction*. The shortening and eversion at once disappeared, and although the tenderness, especially in front of the joint, continued for some days, the limb rapidly recovered its usefulness.

Dr. Packard expressed the opinion that this was a case of luxation into the sciatic

notch, with rupture, perhaps, of the outer branch of the λ ligament, possibly of both branches. He did not know how otherwise to account for the symptoms presented.

RAPID BREATHING AS A PAIN-OBTUNDER IN MINOR SURGERY, OBSTETRICS, THE GENERAL PRACTICE OF MEDICINE, AND OF DENTISTRY.

BY W. G. A. BONWILL, D.D.S.,
Philadelphia, Pa.

*Read before the Philadelphia County Medical Society,
May 12, 1880.*

WHAT led to the discovery of this effect of rapid breathing was in an operation upon myself in 1855, while inhaling chloroform. I was conscious of touch and not pain. I applied it to dentistry in obtunding sensitive dentine, and finally, in 1875, applied it, by increasing the inhalations to one hundred a minute, to the extraction of teeth, and, soon after, to minor surgery, etc. I can in this way render patients insensible to acute pain from any operation where the time consumed is not over twenty to thirty seconds. While the special senses are in partial action, the sense of pain is obtunded, and, in many cases, completely annulled, consciousness and general sensibility being preserved. To accomplish this each patient must be instructed how to act and what to expect. Simple as it may seem, there is a proper and consistent plan to enable you to reach full success.

Before the patient begins to inhale he is informed of the fact that, while he will be unconscious of pain, he will know full or partially well every touch upon the person; that the inhalations must be rigorously kept up during the whole operation without for an instant stopping; that the more energetically and steadily he breathes, the more perfect will be the effect; and that if he cease breathing during the operation the success will not be so complete.

It is very difficult for a person to respire more than one hundred times to the minute, on account of the exhaustion produced. *For the next minute following the completion of the operation the subject will not breathe more than once or twice.* Very few have force enough left to raise hand or foot. The voluntary muscles have nearly all been subjugated and overcome by the undue effort at forced inhalation of one

hundred over twenty,—the normal standard. It will be more fully understood, further on in my argument, why I force patients, and am constantly speaking to them to go on.

I further claim that for the past four years, so satisfactory has been the result of this system in the extracting of teeth and deadening extremely sensitive dentine, that there is no longer any necessity for chloroform, ether, or nitrous oxide in the dental office, for such purposes.

The anæsthetics, when used in major operations, where time is needed for the operation, can be made more effective by a lesser quantity when given in conjunction with "rapid breathing." Drs. Garetson and Hewson, who have thus tried it, tell me it takes one-half to three-fourths less; and the after-effects are far less nauseating and unpleasant.

As an agent in labor where an anæsthetic is indicated, it is claimed by one who has employed it (Dr. Hewson) in nearly every case for three years, that he has used "rapid breathing" solely and to the exclusion of chloroform and ether.

If in breathing the quantity of carbonic acid gas set free is in exact relation to the amount of oxygen taken into the blood, what effect *must be* manifested where one hundred respirations in one minute are made while the heart is propelling the blood only a very little faster through the lungs, and *more feebly*,—say ninety pulsations at most,—when to be in proportion it should be four hundred to one hundred respirations to sustain life any length of time?

You cannot deny the fact that a definite amount of oxygen can be absorbed, and is absorbed, as fast as it is carried into the lungs, even if there be one hundred respirations to the minute while the pulsations of the heart are only ninety. Nature has made it possible to breathe so rapidly to meet any emergency, and we can well see its beautiful application in the normal action of both the heart and the lungs while one is violently running.

You are already aware how small a quantity of carbonic acid in excess in the air will seriously affect life. Even two to three per cent. will in a short time prove fatal. In ordinary respirations of twenty to the minute the average of carbonic acid exhaled is 4.35.

From experiments long ago made by

Vierordt (see Carpenter, p. 524) you will see the relative percentage of carbonic acid exhaled from a given number of respirations. When he was breathing six times per minute, 5.5 per cent. of the exhaled air was carbonic acid; twelve times, 4.2 per cent.; twenty-four times, 3.3 per cent.; forty-eight times, 3.0 per cent.; ninety-six times, 2.6 per cent.

Let us deduct the minimum amount—2.6 per cent. of carbonic acid when breathing ninety-six per minute—from the average, at twenty per minute, or the normal standard, which is recorded in Carpenter (p. 524) as 4.35 per minute, and we have retained in the circulation nearly two per cent. of carbonic acid; that, at the average, would have passed off through the lungs without any obstruction, and life equalized; but not having been thrown off as fast as it should have been, it must of necessity be left to prey upon the brain and nerve-centres; and as two to three per cent., we are told, will so poison the blood, life is imperilled, and that speedily.

I think we are now prepared to show clearly the causes which effect the phenomena in "rapid breathing."

The first thing enlisted is the *diversion of the will-force* in the act of forced respiration at a moment when the heart and lungs have been in normal reciprocal action (twenty respirations to eighty pulsations), which act could not be made and carried up to one hundred respirations per minute without such concentrated effort that ordinary pain could make no impression upon the brain while this abstraction is kept up.

Second.—There is a specific effect resulting from enforced respiration of one hundred to the minute, due to the *excess of carbonic acid gas set free from the tissues*, generated by this enforced normal act of throwing into the lungs *five times* the normal amount of oxygen in one minute.

Third.—Hyperæmia is the last in this chain of effects, which is due to the excessive amount of air passing into the lungs, preventing but little more than the normal quantity of blood from passing from the heart into the arterial circulation, but damming it up in the brain.

PROFESSOR VIRCHOW has been elected by an overwhelming majority to represent Berlin in the German Parliament.

CASE OF DEATH OCCURRING
DURING THE ADMINISTRATION
OF BROMIDE OF ETHYL.

BY JOHN B. ROBERTS, M.D.,

Lecturer on Anatomy and on Operative Surgery in the Philadelphia School of Anatomy.

TO obtain a proper appreciation of the merits of any method of operating or of treatment it is necessary to report dispassionately all results: hence, at the request of Dr. R. J. Levis, I hasten to give the history of a patient who died, day before yesterday, during anæsthesia produced by ethyl bromide. The boy was eighteen years old, and was admitted to the Jefferson Medical College Hospital on April 14, 1880, with stone in the bladder, which had given rise, secondarily, to prolapse of the rectum. His health was exceedingly poor, as evinced by feeble pulse and other symptoms of general debility. The operation was accordingly delayed week after week, in the endeavor to obtain a better condition, and he was ordered a combination of iron, quinine, and strychnia as a tonic, and was given extra diet. Urinary examination, it is said, showed no albumen.

His health improved somewhat, and, as hot weather was liable to depress him, it was determined, after due consideration, that an attempt at operation was justifiable. On May 26, 1880, after taking fifteen grains of quinine and a dose of whisky, he was prepared for lithotomy. Even then his feeble circulation and nervous agitation were subjects of remark, but the consultation had already taken account of his debility, and decided that operative treatment was proper. Two fluidrachms of ethyl bromide were administered by the resident surgeon in the ordinary way, and, as there was considerable struggling, another drachm was added a little afterwards. At a later period a fourth drachm was poured upon the towel. During the earlier stages of the administration I had my finger constantly upon the pulse, but, as it became necessary for me to hold the staff, I requested a bystander, well known as an administrator of anæsthetics, to watch the patient during the progress of the operation.

Just after the cutaneous incision had been made by Dr. Levis, the gentleman mentioned called the resident's attention to the imperfect respiration. The towel

was removed from the face at once, and the cheeks slapped to induce inspiration. *The lips at this time were pinkish, and no marked cyanosis was noticed.* As only one or two feeble inspiratory efforts could be observed, the patient was inverted, nitrite of amyl given by inhalation, artificial respiration instituted, and the galvanic battery applied to the neck and epigastrium. The tongue was drawn forward to give free access of air to the larynx. All efforts, though continued for a long period, were unavailing, and for a considerable time before these procedures were stopped it was evident that life was extinct.

The whole time of anæsthesia, unfortunately, was not taken, nor does it seem possible to give accurate notes of the phenomena immediately preceding the cessation of respiration. The history I have given has been obtained from Dr. Levis, the resident physician, and my own observation during the time of anæsthesia.

The autopsy was made about two hours after death by the coroner's physician, Dr. J. G. Lee, who found the following conditions:

Commencing rigor mortis. In left perineal region an incision two inches long, penetrating skin and superficial fascia. Tissues of scalp congested. Membranes of brain congested, ventricles containing a small amount of clear serum; brain-substance normal; membranes of medulla oblongata congested; substance of medulla anæmic. No odor of ethyl bromide perceptible. On opening body, some slight odor of ethyl bromide was noticeable. The apex of upper lobe of left lung was bound to thoracic walls anteriorly and posteriorly by old [circumscribed] pleuritic adhesions. Upper lobe was partially consolidated, the lung-tissue containing a number of cavities, with caseous and purulent deposits. Upper and lower lobes of right lung bound to thoracic walls anteriorly and posteriorly by old pleuritic adhesions. Lung-tissue consolidated and filled with cavities of various sizes. Trachea and bronchi contained a small amount of pus, otherwise normal. Right side of heart dilated, auricle and ventricle containing post-mortem clots. Concentric hypertrophy of left ventricle, which was contracted, and contained a very small post-mortem clot. Left kidney enlarged and

diseased; right kidney enlarged; liver normal; intestines normal. Concentric hypertrophy of the bladder, which contained at its neck two encysted calculi.

Such were the gross appearances of the organs. The microscopic examination was made by Dr. Longstreth, the pathologist of the hospital, and is as follows. The delay in publishing the case after writing the first part of this article is occasioned by the time occupied in obtaining this careful statement of the microscopical appearances:

The examination of the kidneys showed that the inflammation of the pelvis of the organ was extending to the kidney itself. This condition was visible as whitish streaks running in the course of the straight tubes of the medullary pyramids, and also within the cortex itself. The microscope confirmed the naked-eye appearance. The inflammatory matter did not show any tendency to break down into purulent material; it was rather of the nature of an infiltration. It is probable that in a short time cheesy blocks would have been formed in the kidney as the results of this process.

The morbid process in the lung was a catarrhal pneumonia; no tubercular deposits were to be seen.

The heart-fibres exhibited atrophic changes such as are so frequently present in advanced lung-disease, but there was no fatty degeneration.*

ON CALOMEL AS A LAXATIVE AND LOCAL ANTIPHLOGISTIC.

BY E. T. BLACKWELL, M.D.

WHEN there is *acute* constipation, and we have not to struggle against the force of habit, calomel fulfils the indications exceedingly well, being easy of administration, quick yet gentle in its operation, while carrying away the excremental debris choking up the emunctories. Its action in quickening and restoring secretion from all the glandular structures implicated in digestion is peculiar, and unequalled by any other medicine. In

* This is an exceedingly interesting and frank relation of the death from bromide of ethyl, and the thanks of the profession are due to Dr. Levis and his assistants for the zeal with which they prosecuted the study of what bade fair at one time to be a very valuable addition to our materia medica. The editor of the journal has taken the liberty of italicizing one line of the report, because it seems to show that the death was from syncope and not from failure of respiration.

the constipation of infants its effects are admirable. The loaf-sugar and molasses directed by some† as excipients are objectionable from their highly fermentable quality, and the sugar of milk may therefore be usefully substituted.

R Hydrargyri chlor. mite,
Sacchari lactis, aa ʒss.

M. et ft. chart. no. x. Of these, one may be given every two hours till a proper effect is produced. By their means I have been able permanently to relieve many infants in whom the more usual means had utterly failed.

In the beginning of the year 1870, C. S., aged 20 months, and weighing nineteen pounds; pale, anæmic, hectic, with meteoric bowels and intensely acid stomach; troubled with constant vomiting and most obstinate constipation, caused by an exclusive diet of crackers and milk and a rigid in-door life; and attended by a torpid state of the liver and intestinal glands, was placed in my charge. So great was the debility from this perverse regimen, and the violence inflicted on the system through its influence, that life itself was imminently endangered. The acidity having been neutralized by bismuth and solution of chlorinated soda, and its reaccumulation guarded against by providing food less liable to fermentation, the constipation was easily overcome by calomel, and, a suitable regimen having been instituted, the health was speedily restored and the patient enabled to take the air, not only with impunity, but with the utmost benefit.

In the constipation of adults originating in cessation of secretion from pyretic or inflammatory processes I habitually use this remedy with very gratifying effects. It is essential to success that nothing be exhibited that may interfere with its operation, and that it be persevered in until the bowels are fairly opened. The morning is the most appropriate time, as the bowels may be relieved during the day, leaving the night for rest or for the administration of other medicines. When the biliary organs are choked with bile the calomel may be combined with podophyllin, five grains of the former and half a grain of the latter making a most effectual combination for a robust adult person.

While I do not suppose that a drug, acting never so slightly upon the glandular system by absorption, can be wholly without influence upon the general economy, any effect upon my patients beyond that

† Dewees, *Physical and Medical Treatment of Children*, art. "Jaundice," p. 292.

which is salutary has been so moderate as to escape observation, except in a very few instances, when there was an impression upon the gums of an unimportant and transient character.

We shall fail to exhaust the merits of calomel as a curative agent except we call in its aid in those ailments whose prominent developments are upon the surface of the body. Following the teachings of Dewees, I have constantly used it, in form of ointment, in the various eczemas of infants, especially in those diffuse forms affecting the face, neck, and ears, finding it very speedily to cure them when acute, and to be a most useful addition to the constitutional means essential in the chronic. The ointment of this author, while admirable in some respects, may often be replaced with advantage by a compound containing half its amount of the mercurial with unguentum petrolei.

R Hydrargyri chlor. mite, 3j;

Ung. petrolei, 3j.—M.

This has the strength of Pereira's ungu. hydr. chlor.,* in which lard is the adjuvant.

Perhaps no single affection has caused so much misery to nursing women, or so vexatiously taxed the ingenuity of medical men, as the sore nipples incident to lactation; and I think we may cordially cast a veil over the disasters following the incautious use of calomel in the past, in view of its good services when regulated by enlightened experience, and especially in respect to its healing virtues in this agonizing condition.

R Hydrargyri chlor. mite,

Glycerinæ, aa ʒss.—M.

Immediately after nursing, the nipple having been properly cleansed, stir the mixture and apply with a camel's-hair pencil, covering the part with some impermeable material. The application should be removed before suckling, and reapplied immediately after. The troublesome disorder soon gives way, to the immense relief of the sufferer and the satisfaction of the attendant.

FORMULÆ FOR OZENA.—1. Iodoform, 5 grains; ether, 1 drachm; vaseline, 1 ounce. Apply with a camel's-hair brush, and snuff some well up the nostril. 2. Chloral, 1 part; water, 15 or 20 parts.

* *Materia Medica and Therapeutics*, vol. i. p. 802.

ON THE DIFFERENCE IN THE EFFECTS PRODUCED BY NICOTINE WHEN INJECTED INTO AN EFFERENT FROM THOSE PRODUCED BY THE INTRODUCTION OF THE POISON INTO AN AFFERENT BLOOD-VESSEL.

BY B. F. LAUTENBACH, M.D.

UNDER efferent blood-vessels I include the veins of the portal circulation with the arteries.

The drug employed was bought of Messrs. Gehe & Co., Dresden. The experiments were made during the summer and autumn of 1877.

When one-half drop of the poison was injected into a vein of the general circulation of an ordinary-sized rabbit, death followed within three minutes. When, however, I injected three-fourths of a drop into the femoral artery of an animal of the same species, there resulted, not death, but a greatly increased frequency of the pulse, loss of tactile sensibility, sonorous respirations, and prominence of the nictitating membranes of the eyes. The animals recovered in less than two hours.

Similar results were obtained where cats were experimented on instead of rabbits.

In several experiments convulsions were produced by injecting one-half drop of the poison into the carotid arteries of cats. These animals, much to my surprise, also recovered.

The results following the injection of nicotine into the femoral artery are precisely those which Professor Schiff and myself saw following the injection of the same alkaloid into the radicals of the vena porta. Then we explained them by supposing that the poisonous properties of the nicotine were destroyed by the liver.

Since compelling the drug to pass through any set of capillaries seems to prevent its being poisonous, we can no longer make use of this explanation. Another explanation I will not advance, as it would be but guess-work at the best.

ECZEMA FORM ERUPTION DUE TO ATROPIA.

—Dr. Julius Donath (*Wiener Med. Wochens.*, No. 12, 1880) cites a case where the introduction of a few drops of a one-per-cent. solution of sulphate of atropia into the eye was invariably followed by severe "eczema," and pseudo-erysipelatous swelling and redness of the face and neck. The patient was a woman of forty-five, of good constitution.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

SERVICE OF D. HAYES AGNEW, M.D., LL.D.

Reported by CHARLES BAUM, M.D.

UNION OF TENDONS—SHOULDER-JOINT AMPUTATIONS—RIGHT-SIDED HERNIAS.

D. M. McL., admitted March 17, 1880, about one hour after the accident. While removing sawdust from beneath a rapidly-revolving circular saw, the saw-teeth came in contact with the dorsal surface of his right hand, dividing all the tissues and almost completely severing the metacarpal bones, except that of the thumb, just one and a half inches from the wrist-joint.

The entire wound was lacerated, and gaped almost one inch. The distal ends of the tendons of the extensor communis digitorum were lying at the bottom of the wound, much lacerated. The proximal ends were retracted to such an extent as not to be visible. There was a groove almost one-eighth of an inch broad, transversely, in the metacarpal bones.

The ends of the severed tendons were immediately approximated by means of fine carbolyzed catgut. Each retracted tendon was brought down by passing a dissecting forceps along the sheath to the extent of three-quarters of an inch and seizing the lacerated end. The tendency to retract—over which the patient seemed to have but little control—was so great that it was necessary to secure the end with a tenaculum while the sutures were being passed. A suture was passed first through the centre of the tendon, and then through its sheath upon each side. Immediately after the sutures were fastened the patient was able to extend his fingers almost as well as before the accident. The procedure was not a very painful one, he stated. After removing bone- and wood-dust, the edges of the wound were loosely approximated with the same suture, dressed with carbolyzed oil, and the hand, with the fingers slightly flexed, was placed upon a palmar splint.

The wound was dressed thirty-six hours afterwards, at which time there was no puffiness or inflammation apparent. Upon the sixth, seventh, eighth, and ninth days granules of bone-dust escaped, with a small amount of purulent discharge. At the ex-

piration of two weeks, upon being allowed to try, the patient was able to extend his fingers slightly. At no time was there any discharge from the sheaths of the tendons. The lacerated wound upon the surface healed kindly by granulations. He was discharged just five weeks after admission, with power to extend his fingers, but not completely, as there still remained a slight amount of false ankylosis about the articulation of his fingers.

Upon the 21st instant I had the satisfaction of seeing his hand, and found the power of extension strong and complete. He could pick up a pin with ease, his fingers having become as supple as ever. The motion of abduction of the thumb is not complete, being restricted by some contraction of the cicatrix upon the dorsal aspect of the hand. He has long ago resumed work, and experiences no restraint in the muscular action of his fingers.

In shoulder-joint amputations, in order to control hemorrhage and to dispense with the necessity of an assistant's fingers to follow the knife, Dr. Agnew introduces an acupuncture pin high up under the axillary artery, which is compressed with a few figure-of-eight turns of a ligature. Thus the limb is removed with ease, and without hemorrhage. After the vessels are secured the pin is withdrawn and the wound closed.

A lad of ten years of age, who was the subject of an oblique inguinal hernia upon the right side, was presented to the class. The hernia made its appearance for the first time a few hours before, after lifting heavy weights. Dr. Agnew gave an anatomical reason, and one which he had for a long time taught, for the more frequent occurrence of hernia upon the right side. It is a well-known fact that upon opening the abdominal cavity the intestines can be easily turned out upon the right side, but not so upon the left side. This is due to the attachment of the mesentery, which allows the largest play of motion upon the right side. During every motion of the body, and especially in severe exertion, the intestines are driven downwards with more or less force, and go more to the right side than to the left, on account of this very extent of motion allowed by the mesentery.

PHILADELPHIA, June 22, 1880.

TRANSLATIONS.

EARLY RESECTION OF THE ENTIRE DIAPHYSIS OF THE TIBIA IN CERTAIN CASES OF ACUTE DIFFUSE OSTEO-MYELO-PERIOSTITIS.—A. Faucon, in a paper read before the Académie Royale de Médecine de Belge (*Cbl. f. Chir.*, No. 22, 1880), includes under this designation the disease described by Lücke as "primary infectious inflammation of the medulla and periosteum." After alluding to the labors of various writers on this subject, Faucon gives a case in which separation in the epiphyseal line, with destruction of the epiphyseal cartilages, took place. The patient was a child of thirteen in whom severe septicæmic symptoms necessitated the resection of a piece of the shaft of the tibia twenty-three centimetres in length. A cure, with reproduction of the tibia, took place. There was some shortening, with ankylosis at the ankle and knee. To elucidate the various points in this case use is made of various cases by other writers, which are compared with it, and the author reaches the following conclusions:

1. Early resection of the diaphysis of the tibia cannot be practised as a general method of treatment in all cases of osteomyelo-periostitis diffusa acuta.
2. The procedure is to be preferred in the earlier stages of the disease, when acute septicæmic attacks immediately threaten life.
3. It is indicated in the more advanced stages of the formation of a sequestrum, when the chronic putrid infection can be overcome by the operation.
4. The clinical results of bone-regeneration sustain those gained by experimental means.

PHYSIOLOGICAL AND THERAPEUTIC EFFECTS OF NITRITE OF AMYL.—Dr. Dugan, in his thesis on this subject, an abstract of which is found in the *Bull. Gén. de Thérap.* for May, concludes as follows:

1. When an animal respire the vapor of nitrite of amyl the arterial pressure is immediately observed to be decreased, while at the same time the movements of the heart are accelerated, the respiration becomes irregular, and the animal executes general depressive movements.

2. These symptoms are due to the introduction of the drug into the blood and its contact with the anatomical elements.

3. The fall of arterial pressure is not subordinate to the concomitant cardiac troubles, but depends upon vascular changes.

4. The influence of nitrite of amyl upon the vessels should be considered as an *active vaso-dilative* one, and not as *paralyzing*, since it permits the dilated vessels to contract vigorously under the direct or reflex excitation of the vaso-constrictive nerves.

5. We consider that the diastolic arrest of the heart of the frog which is often observed to occur is the result of excitation of the terminal apparatus of the pneumogastric nerves. In other words, this arrest is not due to central influence. It is observed when the two pneumogastriacs are cut.

6. That acceleration of the heart observed in mammals and man shows various relations with the beginning and with the phases of decline of the arterial pressure.

7. It may be observed even after section of the pneumogastriacs and when all the central accelerative nervous paths are suppressed.

8. It results, doubtless, from the peripheral action of nitrite of amyl on the intracardiac nervous apparatus.

9. The diastolic arrest of the heart is obtained in mammals by toxic doses.

10. The cardiac troubles which are developed under the influence of prolonged inhalation of nitrite of amyl do not cease after the inhalation; they last some days, and show themselves by irregularities and palpitations, with intermittences.

11. Nitrite of amyl has a true action on the striated muscles. It enfeebles the excitability of the gastrocnemius of the frog when inhaled. It causes the excitability of the muscle to disappear entirely when this is exposed to its vapors.

12. Applied directly to the muscle, nitrite of amyl destroys excitability in less than a minute. This results entirely from the local action of the drug, which is irritant and caustic, and not from any particular toxic qualities.

ADDISON'S DISEASE BROUGHT ABOUT BY TUBERCULIZATION OF THE SUPRA-RENAL CAPSULES.—Dr. Maurice Letulle reports (*La France Méd.*, 1880, No. 40) the case of a man of 42, who had suffered some time with obscure pains in the lumbar region, followed by growing spinal deformity. About the same time the patient

began to observe that his skin was changing color. The hands became darker in places, while decolorized patches appeared in the intervals, particularly upon the fingers. The patient's hair, which had been of a light chestnut color, together with his eyebrows and beard, became decidedly darker. He lost strength rapidly. On examination, a month later, the face, trunk, and members were found to present a dull brown tint. The integument generally presented this uniform tint, with the exception of the scrotum, where were two patches of vitiligo, and the hands and feet, where the same white patches were found. The buccal mucous membrane was found to be discolored in places. The patient suffered severe pain in the right loin, where an abscess soon appeared. The lungs were solidified at their summits. During the succeeding weeks this discoloration of the skin became more and more marked, until the man looked like a negro. The patient finally died, when, at the autopsy, the supra-renal capsules were found considerably enlarged, while preserving their general outline; they were bosselated, very hard, yellowish in color, and invaded by a large number of tubercular masses for the most part cheesy. Some points of calcareous degeneration were found in the right capsule. The kidneys were enlarged, congested, and showed yellow, tubercular granulations. The peri-lumbar lymphatic ganglia were all voluminous. Degeneration and abscesses of the vertebral column were noted. The spleen was enlarged, and showed some tubercular deposit; the liver was small. Recent tubercular infiltration of the lungs was noted. There was no pigmentation in the mucous membranes save that of the mouth. Dr. Letulle remarks on the interesting character of this case as one of secondary Addison's disease following osseous tuberculosis of the spine. He thinks the invasion of the supra-renal capsules dependent upon continued tuberculous irritation in the vicinity.

ECHINOCOCCUS AND SPONTANEOUS FRACTURE OF THE THIGH.—Kauzon and Virchow (*Cbl. f. Chir.*, 1880, p. 351; from *Virchow's Archiv*) give the case of a laborer who in his fourteenth year suffered a fracture of the femur. At the end of some months he was entirely cured. Twenty-one years later he was seized with sharp pain in the femur, and a few months later, while going about quietly, he suffered

spontaneous fracture of the thigh at the point of former injury. The fracture remaining ununited, amputation was decided upon. An exploratory incision having been made, echinococcus cysts were found in and about the bone. Exarticulation was then practised; the patient, however, died seven hours after the operation. The autopsy showed echinococci in the liver. The femur, which was examined by Virchow, was filled throughout the whole diaphysis with echinococcus cysts; the cortical substance was thinned and in places dissolved; the trochanters, head, and condyles were free. The walls of the cysts were quite thick; scolices could be found only in a few instances.

PHYSIOLOGICAL AND THERAPEUTIC QUALITIES OF THE POMEGRANATE ALKALOIDS.—At a recent meeting of the Académie de Médecine (*La France Méd.*, 1880, No. 41) Dr. Dujardin Beaumetz read a paper on this subject, in which he draws the following conclusions:

1. The alkaloids of pomegranate, and in particular the sulphates of pelletiérine and isopelletiérine, possess real and active physiological characteristics.

2. These alkaloids give rise to paralysis of the motor nerves, while leaving muscular contractility intact. They do not affect sensibility, and appear to strike suddenly the motor nerves in their muscular terminations; they are, in fact, curarizing agents.

3. The sulphates of pelletiérine and isopelletiérine are active tæniacides, and in the dose of thirty centigrammes in a solution containing fifty centigrammes of tannin they bring away the tænia entire with its head in the vast majority of cases.

4. New experiments should be made in the use of these alkaloids in diseases, as tetanus and hydrophobia, where curara has been employed, and also where a congestive condition of the bottom of the eye is desired, as Ménière's disease.

ON CATCHING COLD.—Dr. O. Lassar (*Virchow's Archiv*, 79ten Bd., p. 168) says that the severest excitation of the skin which is endured under ordinary conditions is that which comes from sudden and extreme changes of the surrounding temperature. Simple and few as are the explanations needed for the processes which occur as a result of excessively lowered temperature on the organs directly affected by the cold, well worked out as

are our theoretical views on the heat-forming economy of the organism under physiological and pathological circumstances, yet the exact knowledge which we possess regarding the pathological effect of sudden changes of temperature is scanty and unsatisfactory.

The question whether the general organism is injuriously affected when from a condition of warmth it is suddenly and for a brief period exposed to the abstraction of heat, has never yet been answered. In order to ascertain the facts in this matter, Lassar undertook a series of experiments upon animals. Rabbits were shaved, and, after having been under observation several days, were suddenly taken from an atmosphere of 34° to 35° C. and plunged into ice-cold water, remaining immersed for one to three minutes. The animal, carefully dried and brought into a warm atmosphere, shivered and shook for hours. If now it was brought into an atmosphere of 20° C. it soon recovered its usual condition. Frequently severe diarrhoea supervened. Almost invariably albuminuria appeared after a day or two, accompanied by hyaline cylinders in the urine and a slight increase of temperature.

This albuminuria usually disappeared in a day or two, but sometimes lasted weeks, and even months, terminating fatally. When recovery took place, new exposures were followed again by albuminuria.

Microscopic examination of organs which to the naked eye offered no signs of disease showed signs of interstitial inflammation; chiefly in the kidneys and liver, but also in the lungs, cardiac tissue, and nerve-sheaths. The skin remained unaffected; the muscular tissue was occasionally slightly colored, but showed no increase of the interstitia nor nuclei in the sarcolemma. The joints remained in all cases intact.

The parenchyma of the affected organs showed no changes, but the vessels, particularly in the lungs and liver, were often enormously dilated, the arteries filled with thrombotic masses, and a plentiful extravasation of white blood-corpuscles into the neighborhood of the veins and the interstitial tissue generally.

For purposes of control, dogs were experimented upon in the same way, and with the same result. Frogs, too, were treated in a similar manner, and, although in general the effect of changes of temper-

ature was not so striking, yet in several cases inflammation of the liver was observed.

In order to observe the influence upon the foetal system, pregnant rabbits were operated upon, and it was ascertained that the foetus also appeared to be influenced by the changes of temperature to which the mother had been exposed. The liver in these cases seemed most strikingly affected, resembling closely the syphilitic liver of new-born infants.

According to Lassar, the only plausible theory of the pathology of catching cold is that of Rosenthal, namely, that the blood suddenly cooled in the periphery of the body and thrown into the interior organs acts there as an irritant, exciting inflammation. And this hypothesis, though seemingly finding little ground to support it, is at least not contradicted by the experiments above cited.

SUSCEPTIBILITY OF NEW-BORN INFANTS

TO THE CONTAGION OF VARIOLA.—Dr.

Lothar Meyer (*Virchow's Archiv*, 79ten Bd., p. 43), after examining the various theories and experiments in relation to the subject, including some made by himself, arrives at the following conclusions: 1. The contagion of variola penetrates the placental circulation. 2. The foetus possesses a much less fully-developed susceptibility for the reception of vaccinia than the new-born infant; the latter, again, less than the older child. 3. The susceptibility to vaccine is not so perfectly developed in the new-born infant as in the older child. That this is most imperfect in the foetus we are justified in supposing, although no proofs can be brought forward to sustain the opinion. 4. New-born children, in spite of their imperfectly-developed susceptibility to vaccine, react almost invariably to the latter when they have been thoroughly inoculated with good virus. 5. The vaccinia of new-born children which is unaccompanied by areola and fever is to be regarded as imperfect. The result of inoculation in new-born infants is, however, never complete. 6. The question as to the penetrability of the lymphatic circulation by fixed vaccine contagium is as yet an open one.

CHIAN TURPENTINE IN CANCER.—The Chian turpentine treatment for cancer is now having a thorough trial in the cancer wards of the Middlesex Hospital in London.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, JULY 17, 1880.

EDITORIAL.

CONSULTATIONS.

THERE is probably no city in the civilized world in which medical consultations are proportionately so infrequent as in Philadelphia. There is certainly a wide-spread feeling against calling them among the profession. This feeling is based not so much upon a question as to their value to patients as upon a fear that they will injure the physician who calls the consultant. Very many doctors evidently have the feeling that asking that Dr. Secundus be called in is equivalent to saying that Dr. Secundus knows more or is more skilful than they. It is true that a consultation may be asked for in such a way as to give rise to this impression; but this is the result of the awkwardness of the physician. A little tact on his part will leave behind the conversation with the friends of the sick the feeling that he is a very careful doctor, one who wants in every way to do the best possible thing for his patient, and will thereby strengthen rather than loosen his hold upon the family.

Talking, a few weeks since, upon this point with a neighboring practitioner, he said, "I never call any consultations. Some weeks ago Mr. — was ill, did not improve, and finally asked that I would call in Dr. Jones. I did so. The patient got well, and the family was transferred to the list of Dr. Jones." The family here was lost, not, as was thought, because the doctor was willing for a consultation, but because he was unwilling. If he had been quicker, and had suggested the consultation before the patient demanded it, Dr. —, having been called in at his request, would not have attended the

family afterwards. For here come in the ethics of the matter. If Dr. Secundus is called in by the family in spite of the attending physician, he, to our thinking, is not justified in refusing afterwards to attend the family. On the other hand, if he is introduced or called in by the family doctor, he is bound by every tie of equity, and also of self-interest, to refuse to attend that family subsequently, even if pressed so to do.

The words that have just been written apply to a much wider district than our city limits. Some few weeks since, whilst upon a professional visit some distance from the city, we heard a doctor of the neighborhood roundly denounced for allowing a patient to die. On attempting a defence, we were met with the statement, "What we blame Dr. — for is not the death of the patient, but that he did not give him the best possible chance by calling a doctor from the city. Money was no object to the family, and why didn't he tell them how ill the patient was, and suggest bringing some one from Philadelphia? then if death had come everybody would have been satisfied that all that could be done had been done."

The *raison d'être* of the consultation is not only the physical benefit of the patient, but the satisfaction of the family.

CORRESPONDENCE.

LONDON LETTER.

THE subject of digestion is one that is now attracting a good deal of attention, and certainly not more than it deserves. The articles now put on the market to aid the natural processes are innumerable. As the directions given with them are not always as accurate as they might be, it may be well to consider digestion broadly, after which the importance of minutiae will become all the more easy to comprehend. Our food is stored for us, in the first place, by vegetable life, as starch, sugar to some extent, fat, and albuminoids. Now, it is obvious, in the first place, that if these stored materials were readily soluble a steady rain might bring ani-

mal life to a close, or disagreeably near to it. Perhaps there may exist soluble stores, but we know little of them, unless encapsuled, as in the grape or orange, and their food-value is somewhat low. Consequently, we see that the ordinary staple food of man is stored in insoluble forms. The act of digestion, then, is an act of "solution." By the action of the saliva-ferment starch is largely converted into sugar, and thus, being soluble, can be taken up into the blood. But before solution can take place we must first have "disintegration." The savage slowly ground his seeds in his mouth, the saliva becoming thoroughly mixed with the food in the tardy act. As time wore on, the disintegration was largely executed by some form of machinery, and the coarse flour so produced was mixed with water and baked. In this process the starch was so modified as to be more readily digestible by the saliva, and so a distinct gain was achieved. But this was all attained quite empirically, and without any reference to what science ultimately had to say as to the *rationale* of it all. The solution of the starch in bread being thus accomplished, or largely accomplished, by the action of the saliva, the albuminoid matters are left free for the action of the gastric solvents. Here again is a question of solution. Just as by the addition of a molecule of water insoluble starch is converted into soluble sugar, so in the stomach the insoluble albuminoids known as "proteids" are converted into the soluble "peptones." This is gastric digestion. It is quite clear, again, that solution must be preceded by disintegration. The food is broken up by the teeth in the act of mastication, and as the starch is converted into sugar, which is soluble, so the albuminoid matter is left free for the solvent gastric juice to act upon it. Now, there are two points to be considered in reference to gastric digestion. The first is the question of disintegration. If the albuminoid matters be not readily disintegrated, then dyspepsia follows. We do not possess teeth in our stomachs, like the lobster tribe, consequently the action of the teeth is supplemented by the muscular movements of the stomach, which roll the mass of food over and over until it falls to pieces. If the food be not masticated thoroughly it is readily comprehensible that the movements of the stomach must be more energetic and protracted in order to produce disintegration, whether of bread or of flesh. The minute fibrillæ of flesh are first separated from one another, and then solution of them in the gastric juice follows. Now, it is clear that ready disintegration is an indispensable quality of food where the digestive act produces much pain from gastric movement. Biscuits, which fall readily to pieces, are more easily digested than bread; loosely-fibred fish, than close-fibred beef; milk mixed with some farinaceous matter to prevent the formation of a firm curd, than plain milk.

Ready disintegration removes, then, what may fitly be termed the "mechanical" obstruction to digestion; and by this selection of food only can we aid disintegration. When the food is thus broken up, the gastric fluid with its ferments can act upon the albuminoids. Now, if the gastric juice be imperfect in quantity or impaired in power, then the solution of albuminoids and the conversion of insoluble proteids into soluble peptones will be interfered with. For both these factors of the digestive act we have artificial aids to natural digestion, viz., maltine to act upon starch, and the pepsin of animals to aid the gastric juice. But in order to wield these agents properly with the maximum of advantage we must possess some acquaintance with the digestion of food. The ferments of the saliva become inert, or, in other words, are killed by the gastric juice, and so are operative only before the contents of the stomach become acid. And yet on large bottles of maltine—the agent we use to supplement the action of the saliva—we find directions to give a child a teaspoonful immediately after food. Now, this is simple nonsense, and the maltine so given is useless, except in so far as it is nutritive itself. It can exercise no influence upon the starch in an acid medium; consequently it is quite clear that it should be added to milk, or milk-gruel, or a milk-pudding, before the act of taking the food into the mouth. So used, it will aid most materially in the conversion of starch into sugar, but as used, according to directions on the bottles, maltine is a food rather than a solvent ferment. The physiology of digestion must be broadly understood before these artificially-prepared digestive agents can be properly utilized.

The actual time required for the transformation of insoluble starch into soluble sugar by this act of hydration under the influence of a ferment is very small, so that if the maltine were added to the milk-gruel or porridge a minute or two before it is placed before the child it would be sufficient. As it is not at all unpalatable, being like molasses in taste and appearance, the child will not object to such addition. It is also desirable in many cases of feeble digestion in adults to pursue the same line, good results, especially after any malady which may have specially affected and impaired the alimentary processes, being so attained.

The difficulties to be got over in the digestion of starch are not great, and have been already largely overcome. Those to be encountered in the digestion of albuminoids are being successfully struggled with, and are being gradually conquered. But it is essential, for the proper wielding of our artificial aids, that we clearly comprehend what factor or factors of indigestion we have to contend with. An accurate diagnosis must precede any potentially possible precision in our

therapeutic aim. If the gastric disturbance be reflex, as most dyspepsias with a clean tongue in women are, then the source of the disturbance must be sought for, and, when found, dealt with rationally before any improvement in the digestive act can be truly established. Of course it is not contended that a correct dietary and a strict adherence to readily-digestible food are not of use in the relief of reflex dyspepsia; but really these measures are only auxiliary to the true remedial measures. In genuine primary dyspepsia, when distinguished from the reflex forms it becomes necessary to differentiate one form from another. In order to do this with some approach to accuracy, we must try to distinguish whether the indigestion is due to deficiency in quantity or quality of the gastric juice, or whether the difficulty lies in imperfect disintegration, or in both combined. Where the digestive act produced much actual pain the late Dr. Leared held that there was actual deficiency in the gastric juice; where there was much flatulence and discomfort he thought the dyspepsia due to defective power in the muscular walls of the stomach. Now, without accepting this as final, these divisions of Leared certainly enable us to comprehend all the better the two factors requisite for the digestion of albuminoids, viz., "disintegration" and "solution." Where there are reasons for holding that the muscular power of the stomach is defective, then the food should be of such quality and so prepared before it enters the stomach as to present a minimum of difficulty in its disintegration. To achieve such end the albuminoid material should be of such a character that it readily falls to pieces. Thus, in very desperate cases it may be necessary to feed the patient on meat-juice or raw meat pounded; but such are extreme cases. Usually it is sufficient to select food which is readily masticated, as boiled white-fish, for instance, or milk with some form of baked starch in it so as to prevent the formation of a firm curd in the stomach. The latter would not require mastication, but the first would. And this brings us to one important factor in the production of indigestion, from the disintegration aspect of the subject. If the teeth be defective or decayed, it may simply be impossible for the sufferer to masticate properly the food. Here the art of the dentist is indispensable to proper digestion. At other times the imperfect mastication is due to the habit of eating too rapidly. The man who has not sufficient time, or does not allow himself sufficient time, over his meals is on the highway to indigestion. However excellent originally his digestive powers are, sooner or later the stomach will resent and rebel against such systematic and persistent outrage. Perfectly competent to undertake its own proper duties and functions, it cannot with impunity be handicapped by having, by its muscular exertions, to supplement imper-

fect mastication in the digestion of albuminoids. Consequently, in the treatment of each case of indigestion the practitioner must make an accurate diagnosis, and then proceed to meet his difficulty rationally. To prescribe pepsin wine when the difficulty is one of disintegration is not a scheme likely to be crowned with success. On the other hand, when the difficulty in the digestive act is that of imperfect solution, then the addition of some artificial pepsin to that provided by the stomach is rational enough. A really good pepsin preparation is of great value when used in the right place; but the present "happy-go-lucky" way of treating indigestion is not suggestive of its proper use. So long as our diagnosis is inaccurate, whether from want of knowledge or from lack of care, so long will our measures for the relief of dyspepsia be insufficient and commonly unsuccessful. Unless the practitioner see clearly whether the difficulty to be overcome is one of disintegration or of solution, he cannot select his measures with any approach to precision. He tries one plan, and then another, until he stumbles at last on some plan or measure which affords relief to the patient. More frequently than is pleasant for either doctor or patient, the latter tries a variety of doctors before any satisfactory conclusion is attained. Perhaps in some instances no satisfactory treatment is ever attained; but as our knowledge, physiological and pathological, increases, these latter cases ought to become rarer and rarer. On the other hand, however, the increasing failure in our digestive organs is a grim fact to be encountered. The demands we make upon ourselves in the modern battle for existence—yes, and for success, too—are telling with terrible effect upon the viscera and their functional activity. The grand digestive powers of our ancestors are dwindling down hand in hand with the wide-spread decay of our teeth. Without attempting any special explanation of the last phenomenon, dental caries is but a part of the general deficiency in our digestive processes. The spread of knowledge can scarcely keep pace with the assimilative failure all along the line. The skill of the physiological chemist is taxed to the utmost to supplement the waning digestive powers, alike in the child and in the adult. To borrow the digestive juices of animals, or, rather, to appropriate them for our needs, is all very well, but the slightest reflection will demonstrate that, after all, such measures can only be palliative. Granting that in certain particular cases they are curative as regards the individual, they can claim no such position as regards the race and future generations. No more can a regulated dietary be regarded as curative in that wider sense. What we must do in order to restore the digestive powers of the race to their pristine activity, or, indeed, to the position that they occupied

within a comparatively recent period, is not yet very apparent, nor am I proposing to grapple with that aspect of the question now. What is being attempted at present is the practical aspect of the relief or cure of indigestion according to the indications of each particular case as regards the measures to be employed. In those complex cases where disintegration and solution are both implicated and imperfect, it is obvious that a properly-selected dietary must be the first thing to be essayed; then comes the question of aiding solution by artificial pepsin. As to the special preparation to be used in each case, nothing can be said here, further than that the choice would be determined by the features of the case. Where there are pain, flatulence, and discomfort, probably an acidulated pepsin preparation is indicated; but in those cases where there are acid eructations, with heart-burn,—where, in fact, the offending matters are the fatty acids produced in the digestive act,—probably a pancreatic preparation, with an alkali, rather seems to be suggested. It is not generally known, however, that a stronger acid is often most effective in destroying the feeble but offensive fatty acids of indigestion. Thus, many cases of heart-burn are most effectually relieved by a few drops of a mineral acid, as hydrochloric or phosphoric, or even by a vegetable acid, as citric, for instance, or by the lactic acid of sour milk.

As to the alkaline digestion of our food by the pancreatic secretion, and the effects of the bile acids and their salts upon fats, they cannot be considered at present. All that may be added is a few words on the importance of studying the tongue in indigestion. When perfectly clean, a reflex cause may ordinarily be looked for. When the tongue is foul and laden with dead epithelium and debris, then the condition of the alimentary canal must be carefully studied. Purgatives may be indicated, but if there be a yellow shade on the fur presenting the stain of taurocholic acid, then those purgatives must be combined with hepatic stimulants, as by a mercurial and colocynth pill at bedtime and sulphate of soda and Rochelle salt in a warm infusion of gentian first thing next morning, warm bath by temperature, and carminatives. When the epithelium is defective, then milk and alkalies, either lime or magnesia, according to the state of the bowels, must be the sole food, for a time at least, and the medicine *par excellence* is bismuth. But the main fact to be kept steadily in view is that all digestion is a process of solution, and that for successful solution of our food efficient disintegration is indispensable.

J. MILNER FOTHERGILL.

ointment for chronic eczema.—

R Hydrarg. chlor. mit., gr. xv ad xxv;
Acidi tannici, ℥ij;
Glycerol. amyli, ℥i.—M.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

AT a conversational meeting held at the hall of the College of Physicians, Philadelphia, May 26, 1880, Dr. John H. Packard, Vice-President of the Society, in the chair, Dr. James Collins read the report of a "Case with Hydrophobic Symptoms," followed by the notes of the autopsy by Dr. C. K. Mills, and Dr. Carl Seiler presented some fine microscopic preparations (large sections) of the spinal cord and brain from the case.

DISCUSSION UPON ANALGESIA BY RAPID BREATHING.

Dr. Addinell Hewson stated that he wished to refer to two points, one made by Dr. Benjamin Lee and the other by Dr. Bonwill in their papers of the previous meeting. Dr. Lee had stated that the term analgesia used by Dr. Hewson in his paper before the International Congress, 1876, was not an innovation, as could be determined by a reference to Dunglison's dictionary. This Dr. Hewson was not only ready to admit, but showed by the edition of 1846 that both terms—anæsthesia and analgesia—were there used as strictly synonymous,—this was before the use of ether and chloroform,—whereas in Hedericus's Greek-Latin Lexicon (edition by Samuel Patrick) for 1727 the two terms were made distinct,—the one, analgesia, to mean *insensibility to pain* only, and the other, anæsthesia, to mean general insensibility with loss of consciousness,—the one corresponding to the effects of rapid breathing, the other to those of ether, chloroform, and other recognized anæsthetic agents.

The error of Dr. Bonwill was in intimating that Dr. Hewson laughed at the idea when first presented to him of using this method. What Dr. Hewson objected to then, as now, was Dr. Bonwill's theory or explanation, namely, that of increased oxidation or oxygenation of the blood. Dr. Hewson here referred to the experiments of Bernard and Guibert, which sustain the opposite view as to the effects of rapid breathing: a hundred respirations in a minute could not be attended with as full oxygenation of the blood in the lungs as fifty or forty, or even twenty.

This analgesia from rapid breathing he constantly employed in his office for small operations, such as the removal of a finger, etc. The manner of using it is to throw a napkin over the patient's face and get him to breathe rapidly. Consciousness is not lost, and the patient will move his position or stop the rapid respiration when told to do so. Insensibility to pain temporarily exists, while ordinary tactile sensibility is continued.

He also employs this method in labor, directing the mother to breathe rapidly while

he puts on the forceps without her knowledge. By this method he claimed that he could deliver the mother of both child and placenta and be out of the house within fifteen minutes from the time of entering it, except when hemorrhage or other complication exists. He did not believe that rapid respiration favored hemorrhage.

Dr. Lee said that he had no theory of the mode of action of this anæsthetic to offer.

The resolution by which this subject was brought up for discussion this evening called for a demonstration of the method on the part of those who introduced it at the last meeting.

From the nature of the case, such a demonstration before so large a body would be attended with great difficulties. As an equivalent, however, he would call upon gentlemen present who had experienced the analgesic effects of rapid respiration in their own persons to give their testimony in regard to it. He would ask Dr. Buck to recite his own experience.

Dr. F. J. Buck said that he had employed the method personally during the opening both of a very painful ischio-rectal abscess, which was so deep-seated that the attending surgeon doubted the existence of pus, and also of an axillary abscess. In each case he had experienced no pain, although he could feel the cutting.

Dr. O'Hara reported a case of tracheotomy upon a child who was breathing very rapidly, in which no pain was apparently caused by the operation.

Dr. Lee presented Dr. Kite, a graduate of the University of Pennsylvania, who had made a number of personal experiments with rapid breathing, especially as an adjuvant in the administration of ordinary anæsthetics.

Dr. Kite stated that under Dr. Bonwill's supervision he had tested the analgesic effects of rapid respiration, and declared that sticking needles through the skin gave no pain whatever. At first there is a decided sense of exhilaration during rapid breathing, just as from ether; then the senses become confused, there is blurring of sight, peculiar buzzing in the ears, and more or less vertigo. At the rate of one hundred times in the minute, breathing cannot be continued for more than a few minutes at a time.

He believed that this method might be advantageously combined with ordinary anæsthetics. Being easily affected by ether, a very small amount usually causing vomiting, he could not ordinarily employ it upon himself. But after rapidly inspiring for some time, a very moderate quantity of ether had made him completely unconscious, and when he revived he had no nausea or vomiting. He had repeated this experiment frequently; on one occasion he took ether twice on the same day, and fully confirmed the previous

observation that by rapid breathing he could escape the nausea and vomiting.

He quoted Hermann's Physiology in support of the view that the residual air in the lungs becomes highly oxygenated, and does not contain its ordinary proportion of carbonic acid, instead of being deficient in oxygen. For several minutes afterwards there is lessened desire for breathing. There is a damming up of the blood in the lungs during rapid breathing, and a diminished amount of carbonic acid in the expired air.

Dr. Hewson said that he had especially studied the movements of the chest and examined the lungs, and was positive that the lower part of the thorax moves very slightly. The inspiratory movements are short when breathing at the rate of one hundred per minute; expansion of lungs is diminished to a marked degree; there is scarcely any diaphragmatic action. In reply to a question from Dr. Blackwood, he said that no danger was to be apprehended, because the patient retains consciousness, and will stop when told to do so.

Dr. W. R. D. Blackwood stated that the reason he asked the question was that he had tried it in a somewhat hysterical patient, and she kept on breathing rapidly for such a long time that he was somewhat alarmed. In a case requiring pulling of a molar he had tried the method, but the patient complained of the pain nevertheless.

Dr. Bonwill denied the statement that the insensibility to pain was caused by diminished oxygenation of the blood, but maintained the contrary view. After running rapidly, the number of the respirations and the heart's action are both increased. In the present plan the respirations are increased, but not the heart's action; the consequence is that less carbonic acid is set free, and the blood contains an excess of oxygen.

Carpenter's Physiology states that forty respirations per minute will give 4.35 per cent. of carbonic acid in the expired air, but at ninety-six per minute only 2.25 per cent., which confirms the results of his personal observation.

Dr. Hewson referred to his original paper in the Transactions of the International Congress at Philadelphia for an extended statement of his views upon this subject, which views were also supported by Bernard and Guibert.

Dr. H. Lenox Hodge regretted that no demonstration had been made before the Society, as had been promised. It has been tested in the presence of students, and he saw no reason why it should not be repeated here.

He had noticed that this method was used not so much as a substitute for other anæsthetics, but rather in cases for which no anæsthetic is ordinarily employed. One of its advocates had recommended its employment in

obstetrics; but it is an obstetric aphorism that you must tell the woman that you are putting on the forceps. Why? Because she does not fee' them as they pass along the yielding tissues to the side of the foetal head.

In cases of tracheotomy the patients are unfortunately often more than half dead, and often no anæsthetic is used.

On motion, further consideration of the subject was postponed, in order that Drs. Lee and Bonwill might prepare a demonstration with cases.

Dr. Seiler presented a modification of laryngeal forceps.

Dr. Charles T. Hunter said that when Mr. Gemrig first imported the Strerks tube-forceps they were shown to him, and he had suggested their use for the extraction of bullets. He was not aware that they had ever been employed for this purpose, their original use being as laryngeal forceps.

Dr. H. Lenox Hodge regarded the suggestion of Dr. Seiler as very ingenious and a decided improvement. The principle is not new, however, as he had in his possession several old instruments constructed upon the same principle for the removal of intra-uterine polypoid growths, which had been employed by his father.

On motion, the thanks of the Society were tendered to Drs. Collins, Mills, and Seiler, and the discussion upon "Case with Hydrophobic Symptoms" was postponed until the next meeting. F. W.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, MAY 27, 1880.

THE VICE-PRESIDENT, J. SOLIS COHEN, in the chair.

Specimens—liver, stomach, and duodenum—from a case of catarrhal jaundice—Enormous distention of the hepatic duct. Presented by Dr. FREDERICK P. HENRY.

I. P., a fisherman, of temperate habits, æt. 63, was admitted to the Episcopal Hospital on May 15, 1880. His illness began five weeks before, and its onset was so insidious that he was unaware of anything being the matter with him until a friend remarked upon the unusual yellowness of his skin. Since then he has had occasional pains in the stomach and right shoulder. On admission, the icterus was intense, and the urine, which was acid, non-albuminous, and of specific gravity 1013, responded decidedly to the test for bile-pigment. The bowels were loose, and the stools clay-colored. The tongue was heavily coated. The abdominal walls were slightly œdematous, and fluctuation could be obtained on palpation in the lumbar regions. There was no vomiting from the date of the patient's admission, and no complaint of pain, although there was some tenderness in

the epigastrium. The symptoms, from the time of admission until death, which occurred on May 23, were gradually increasing weakness and stupor, with diarrhœa amounting usually to three stools daily. The treatment consisted chiefly in the use of nitrate of silver and opium pills and gallic acid.

At the autopsy more than a quart of serum was found in the peritoneal cavity. The tissues were all deeply stained with bile-pigment, and this was particularly noticeable in the intima of the arteries. The only organs in which anything abnormal was observed were the stomach, duodenum, biliary ducts, gall-bladder, and liver. The mucous membrane of the anterior wall of the stomach was greatly thickened and thrown into numerous prominent ridges, which, by their intersection, produced an irregularly-retiform arrangement. On its posterior wall, and in the line of the lesser curvature, were signs of a more acute catarrhal process, consisting of redness and punctiform hemorrhages, with thickening of the membrane. In the duodenal mucous membrane the changes resembled those of the lesser curvature of the stomach, but were more marked. Near the orifice of the ductus communis was an ecchymotic patch about half an inch long. The common duct and the gall-bladder were both slightly dilated, but the most conspicuous abnormality was to be seen in the hepatic duct, which was dilated almost to the size of the normal gall-bladder. The distention caused it to lie in contact with the gall-bladder, giving rise, on first inspection, to the supposition of a supplementary bladder. This view was dispelled on observing the extreme thinness of its walls and the different character of its contents as compared with that of the gall-bladder. The point of stricture was not determined, as a probe could be easily passed along the common duct from the duodenum into both the gall-bladder and the dilated hepatic duct, and pressure upon either caused bile to flow into the duodenum. The bile in the dilated hepatic duct was of a pale-amber color, and of low specific gravity, while that in the gall-bladder was viscid and blackish-brown in color. The liver was somewhat enlarged, owing to a great engorgement of bile identical in appearance with that in the hepatic duct. Section into different parts of the gland was followed by a copious flow of bile.

The case was one of catarrhal jaundice, in which the obstruction to the outflow of bile was so great and long-continued as to cause dilatation of both the gall-bladder and the hepatic duct, moderate in the case of the former, extreme in that of the latter, where the backward pressure was more directly exerted. The distention finally resulted in complete atony of the walls of the dilated duct.

Carcinoma of the liver. Presented by Dr. FERDINAND H. GROSS.

Mrs. Elizabeth E., widow, native of Ger-

many, aged 60 years, was admitted into the German Hospital, March 9, 1880, and remained under the care of my colleague, Dr. J. M. Barton, until April 1, the beginning of my term of service. The early history of the case is incomplete. At the time of her admission to the hospital she complained of pain in the right hypochondriac region. On examination, a very hard tumor, about the size of an orange, could be distinctly felt at this point. According to her own statement, this had been coming on for about a year and a half. Previously she had enjoyed good health. Her appetite was usually very poor, and her bowels always remained obstinately constipated, requiring the occasional administration of strong cathartics and enemata. Otherwise, her general health at the time of her admission did not appear to be much affected. The tumor, however, soon began steadily to enlarge, and became more painful, so that manipulations about this region were resisted by the patient. Her appetite failed, and her strength rapidly declined. On the 13th of May vomiting began, which in a few days became entirely uncontrollable. Some nutritious fluids were injected into the bowels, but the patient became daily more feeble, and died on the 25th instant, retaining consciousness until the last.

The post-mortem examination revealed the hard tumor in the liver here presented. The external examination showed the hardened mass to be continuous with the liver, and to extend about four inches below the edge of the ribs and to the umbilicus. It had become firmly adherent to the adjacent portions of the abdominal walls, to the pyloric end of the stomach, and to the transverse colon. The growth is about the size of a large fist, spherical in shape, and everywhere firmly attached. No symptoms of disease of the head or chest were ever present, and these cavities were therefore not examined.

I am indebted to my resident, Dr. H. S. Bissey, for some brief notes on the clinical history of the case.

Report of the Committee on Morbid Growths.—"A section of the new formation in the liver is found to consist of a delicate stroma of fibrous tissue arranged to form alveoli, in which are seen large epithelial cells. The tumor is an encephaloid carcinoma.

"June 24, 1880."

Carcinoma of liver. Presented by Dr. C. SEILER for Dr. COLLINS.

Thomas McLaughlin, æt. 67 years, Irish, twenty-eight years in America, was well until December, 1879, when he began to be weak, and suffered from diarrhœa; liver suddenly enlarged, and continued to do so until death. Lungs and kidneys normal. Liver filled nearly two-thirds of the abdominal cavity; would weigh about fifteen to eighteen pounds.

A microscopical examination of the growths in the liver showed them to be carcinomatous.

Tumor of mammary gland. Presented by Dr. C. SEILER for Dr. COLLINS.

E. T. B., æt. 51. Tumor of right mamma. Growth had been noticed about one year; within a month had grown painful; removed.

Report of the Committee on Morbid Growths.—"A section of the tumor removed with the mammary gland shows it to be a scirrhus carcinoma; the histological structure consists of epithelial cells placed in alveolar spaces; the latter have their walls formed by fibrous tissue.

"June 24, 1880."

REVIEWS AND BOOK NOTICES.

NEURALGIA: ITS NATURE AND CURATIVE TREATMENT. By THOS. STRETCH DOWSE, M.D. New York, G. P. Putnam's Sons, 1880.

At the close of the perusal of the two hundred pages of this book we felt under profound obligations to the author for his self-restraint. He says, in the last paragraph, "I might have written more extensively upon the subject." Certainly it has been a narrow escape for his, let us hope, numerous readers. How shall we characterize what has been written? It is both bad and good, or good and bad. As for any logical or scientific faculty, the author's mind seems a hopeless desert; but as a practical physician, bent upon the cure of his patients by hook or by crook, he excites our admiration. Do the rich fields of nervous literature anywhere yield anything more rank than the following definition of neuralgia: "The term of neuralgia is here employed to denote a diseased condition of the blood or tissues of the body and a condition which causes a more or less definite and localized painful affection of the nerves?" Construe this accurately, it means that neuralgia is any diseased condition, and it is also certain diseased conditions. Construe it as loosely as possible, and it means that any organic disease of the nervous system producing pain is a neuralgia. And yet our author tells us later, in italics, that "all neuralgias are curable." Also he speaks of his cases of neuralgia due to tumor of the brain, etc., etc.,—cases as curable as death.

The value of the work, and that on account of which we recommend its purchase by physicians who are well read in the science of the subject, but want a book to make suggestions of treatment in their struggles with neuralgia, consists in the fulness and the suggestiveness, and we may say the originality, of its practical details in the cure of the various forms of disease. Here the book is exceptionally good.

The English of the book is such as to make us happy that it was written in the island

where conceit leads learned men to mistake old Saxon idioms for Americanisms, and cockneyism leads ignorant men to invert their *h*'s. Of the many sentences which might be cited we have only space for one (p. 17): "In the sufferer from neuralgia we have unquestionable evidence of the absence of that recuperative power which normally results from the oxidizing agency of combustion, and is so intimately connected with the molecular interchanges of tissue, and which really means want of proper nutritious assimilation." Oh for an English cook-book, to teach us how to serve up, steaming hot or delightfully cold, this assimilation which is so nutritious! Again, is it the *absence* which normally results and is so intimately connected, or is it the recuperative power which really means the want of this proper nutritious assimilation? Oh, dear Sir Joseph Fayrer, least insular of Englishmen, most genial and polished of a hospitable race, Dr. Dowse may have done thee honor in his dedication, but, for his sake and thy own sake, and for the sake of our common mother-tongue, please, *do* send him to a grammar-school!

CARLSBAD. By J. KRAUS, M.D. London, Trübner & Co.

This little volume contains a full account of Carlsbad, written by the consulting physician of the place, and therefore reliable, except as over-colored. We commend it to invalid travellers and their doctors.

HEALTH AND HEALTHY HOMES: A GUIDE TO DOMESTIC HYGIENE. By GEORGE WILSON, M.A., M.D., Medical Officer of Health, etc. With Notes and Additions by J. G. RICHARDSON, M.D., Professor of Hygiene in the University of Pennsylvania, etc. Philadelphia, Presley Blakiston, 1880. Pp. 314.

This handsome little volume forms, as it were, a connecting link between the excellent series of primers upon sanitary subjects issued by the same publisher and the more systematic manuals of hygiene. It might therefore very properly be termed a second-class book of sanitary science, and will be found useful not only by the public, but also by many of our own profession. Being written in an easy, graceful, and attractive style, it forms an agreeable recreation after the graver but not more important studies which claim the attention of a general practitioner of medicine, and furnishes a vast amount of interesting instruction in regard to Causes of Disease, Food and Diet, Exercise and Training, The Home and its Surroundings, etc., etc. These subjects are all treated of by Professor Wilson, of course, as affected by the admirable sanitary laws enforced in the British empire; and we cordially unite in the hope expressed by the American editor, that the perusal of this work will help to strengthen

public (and professional) opinion in favor of legal enactments for preserving the public health.

GLEANINGS FROM EXCHANGES.

SURGICAL TREATMENT OF EPISTAXIS.—Dr. Edward Hamilton, in a communication to the *British Medical Journal* (vol. i., 1880, p. 691), denounces the ordinary Bellocq's canula as a frequently useless and sometimes pernicious instrument. He himself takes a strip of linen material three feet long, with a width in proportion to the fineness of the texture, perhaps an inch on the average. This may be soaked in some domestic astringent at hand,—tea, alum-water, saturnine solutions; oil may be used, but it should be sparingly, for, although it greatly facilitates the introduction of the material, yet it interferes with the imbibition of moisture, and thus prevents the subsequent expansion of the plug which is useful in checking the escape of blood by its compressing effect. The best of all fluids, if at hand, is a saturated solution of gallic acid in glycerin, which may be kept for the purpose. This has the advantage of combining astringency and styptic quality with lubrication. This strip of linen should be regarded as consisting of three parts, each intended for its own special position in the nostril. The end of the first portion should be grasped in the blades of a dressing-forceps, and conveyed along the floor of the nostril to the posterior termination of that cavity; the remainder, about one foot, should be rapidly "paid" by the finger and thumb into the cavity of the nostril. The solid mass thus formed should be forced along the floor of the nose, first with the little finger and then with the dressing-forceps or a pencil, until it is found to occupy the posterior nostril, and distinctly felt in it by the finger, *hooked round the soft palate*. This is far the most important part of the entire proceeding, being, as it were, the basis of operations. The second portion should now be paid into the nostril in the same way, and pressed by the finger and forceps into its position,—the roof of the nose. The third and last portion should be pushed into the nostril so as to occupy a position in front of and below the other two, and, being caught within the edge of the alar cartilage, will usually retain its position without trouble. Dr. Hamilton thinks it desirable that the material should not be cut, but retained as one continuous piece for facility of subsequent removal; but too much care cannot be taken in disposing of the first portion. The nostril being thus perfectly and thoroughly packed, every portion of the lining membrane is steadily and firmly compressed, and the escape of blood is rendered physically impossible. In the course of about forty-eight hours the plug begins to loosen, the end falling from the nostril. Directions should be

given to the nurse or attendant on no account to pull it, but simply to cut the projecting part on a level with the nostril according as it drops until the entire plug comes away. There is little fear of the plug remaining too long, as, when the natural secretion is restored, it becomes quickly loosened and unpacked, and falls away through the anterior nostril.

ACUTE RHEUMATISM, WITH MULTIPLE EMBOLISMS.—At a recent meeting of the Clinical Society (*Lancet*, vol. i., 1880, p. 683) Dr. Southey read notes of a case of acute rheumatism, with multiple embolisms. The patient, a woman of 56, came to the hospital on the eighth day of an attack of acute rheumatism, the seventh attack from which she had suffered. On admission, there were general hyperæsthesia, swelling and tenderness in right parotid region, painful swelling of left hand and knee. In addition to an erythematous blush, the skin presented ecchymotic and purpuric spots over trunk and limbs. Temperature, 102.4°; pulse, 120; respirations, 36. The præcordial dulness was increased, and there was a systolic apex murmur, fulness and tenderness of abdomen, with evidence of splenic enlargement. She was given fifteen grains of salicylate of sodium every four hours, which was discontinued after the fourth dose, owing to the supervention of delirium. On the eighth day the highest temperature was 100°; lowest, 99°; pulse, 108; respirations, 42. She was less rational; passed urine involuntarily; the parotid swelling had increased. On the ninth day the temperature was 99.2° to 100°; pulse, 128; respirations, 52. There was drooping of the left eyelid, with less restlessness and pain. Death took place on the morning of the eleventh day, the patient becoming rather suddenly comatose twelve hours before. At the autopsy, no pus in the affected joints; patches of embolic softening in the corpora striata, left cerebral hemisphere, and left lobe of cerebellum; spinal cord normal; right parotid gland congested, not suppurating; the mandibular articulation not diseased; ecchymoses in the larynx, and oedema of the lungs. There was universal adhesion of the pericardium, a calcareous patch existing over the right auricle. The heart was large, and its cavities dilated. The most notable feature was the occurrence of numerous minute embolic areas studding the endocardium on both sides. The muscular substance was granular. Mitral orifice of large size, the valve fringed with vegetations. The liver and kidneys contained recent infarctions of variable size, and the intestines presented numerous ecchymotic spots. Dr. Southey considered the case to be one of acute rheumatism *plus* ulcerative endocarditis, with embolisms in the skin leading to purpura (he believed embolism to be generally the source of "purpura rheumatica"). He had noticed this tendency of endocardial vegetations to break down and give rise to

minute multiple embolisms in old ague cases, but he had never before seen so extensive an embolic affection of the heart-muscle itself. The condition of the nerve-centres suggested that capillary plugging is one of the causes of hyperpyrexia.

FAILURE OF SALICIN AND SALICYLIC ACID IN RHEUMATISM.—At a recent meeting of the Clinical Society of London, Dr. E. Headlam Greenhow, President of the Society, communicated two papers, than which, says the *Medical Press and Circular*, it may safely be affirmed that no more valuable or enduring records are contained in the annals of the Society. These papers are entitled (1) "Ten Cases of Rheumatic Fever treated with Salicin" and (2) "Fifty Cases of Rheumatic Fever treated with Salicylate of Soda." They embody the results of a series of careful and elaborate clinical studies, and from these results Dr. Greenhow has been driven to conclude that the remedies so pertinaciously advanced as having a specific value in overcoming rheumatic fever are, *per se*, actually inoperative in the way of directly affecting the progress of the disease. That they do exert an influence on pain and temperature, easing the one and reducing the other, he is prepared to admit, but with the admission he couples the guarded assertion that beyond this benefit none other is produced, while at the same time the administration of the medicines is attended with risks to the patient as heavy and as lasting for evil as any observed when other methods of treatment are chosen in preference.

TREATMENT OF PROLAPSUS OF THE RECTUM BY HYPODERMIC INJECTION OF ERGOTIN.—At a recent meeting of the Academy of Medicine, M. Vidal, of the St. Louis Hospital, read a paper on the "Treatment of Prolapsus of the Rectum by the Hypodermic Injection of Ergotin." By this new procedure the author succeeded in curing three cases of prolapsus of the anus in adults. The solution that he used was composed of one gramme of the extract of ergot dissolved in five grammes of cherry-laurel water; the amount injected at one time was fifteen to twenty drops. None of the injections were followed by inflammation or abscess. In one case, where the prolapsus was of long standing, M. Vidal operated twenty-two times, leaving an interval of two days between each injection. After the twelfth injection the prolapsus was completely reduced.

TRANSPLANTATION OF TESTICLE FROM GROIN TO SCROTUM.—The *Lancet* (vol. i., 1880, p. 681) contains notes of a case occurring under the care of Mr. Wood, where a boy of 13, who had always worn a truss for a tumor in the right groin, which had within a few days slipped past the truss, was seized with pain in the groin, increase of size in the tumor, and sickness and constipation. On examination, a hard irreducible tumor was found at

the ring, excessively painful, with no impulse on coughing. There was absence of the right testicle from the scrotum. An ice-bag applied continuously for a week's time reduced the tumor to its normal size, but it could not be returned to the abdomen. Some days later Mr. Wood exposed the testicle by a vertical incision over the external ring. The cavity of the tunica vaginalis appeared to be obliterated. There were adhesions between the testicle and the pillars of the ring, which being broken down, Mr. Wood freed the cord for an inch and a half, and by traction was able to bring down the testicle about an inch. He then everted the scrotum, stitched the testicle by catgut to the everted part, put a small drainage-tube in, sewed up the opening, and applied a pad firmly above the testicle, the whole operation being performed antiseptically. Two weeks later the patient was discharged, wearing a water-pad truss.

A NEW TREATMENT FOR GONORRHOEAL OPHTHALMIA.—Mr. Bader (*Lancet*, May 1, 1880), in the case of a patient whose eye appeared nearly lost through an acute attack of gonorrhœal ophthalmia, concluded to try the effect of an ointment made of daturin and nitric oxide of mercury, of each one-fifth of a grain, vaseline one ounce. After thoroughly washing away the discharge with tepid water, he pushed the ointment beneath the upper eyelid of the right eye (which was the worst) with a large camel's-hair pencil; this caused no pain whatever. Both eyes were then bound up with lint thickly smeared over with the ointment. The discharge was washed away every third hour, and the ointment spread on fresh lint reapplied over the eyelids. For four succeeding days Mr. Bader applied the ointment himself beneath the right upper eyelid. On the third day the patient became slightly delirious, probably from the effect of the daturin. The mercury was increased to one grain, the daturin remaining one-fifth of a grain. In three days some improvement was noticeable, and at the end of seven weeks the patient was completely cured. Four other cases also resulted favorably under this treatment.

INFLUENCE OF VARICOCELE ON THE NUTRITION OF THE TESTICLE.—Dr. J. C. Ogilvie Will, in a lecture on this subject (*Lancet*, May 15, 1880), alludes to the wide difference of opinion expressed by different authorities, and suggests the following conditions as indicating when operative interference should be resorted to after giving palliative treatment a fair and prolonged trial: 1. If the varicocele be very large or increasing. 2. If the testicle be atrophied. 3. If acute pain be complained of. 4. If the patient be disqualified from entering the public service. 5. If the stability of his mental faculties be endangered. This last condition is not a fanciful one: it is met with oftener than one would expect. Greater latitude may be allowed in the direction of

operation in those cases where the thoughts of the patient are concentrated, often to the exclusion of others, upon the supposed serious nature of the malady from which he is suffering.

NORMAL LENGTH OF THE CONDYLES OF THE FEMUR.—Dr. Clarke (*British Med. Jour.*, vol. i., 1880, p. 627), in order to ascertain if any given case of knock-knee were due to elongation of the internal condyle of the femur, measured the two condyles. For the inner he took as the upper limit the spine for the introduction of the adductor magnus, and for the lower limit the margin of the articular surface at the extremity of the bone; the external condyle was measured from the prominence immediately above the popliteal groove to the articular margin. Of one hundred femora, the average length of the external condyle was 35.84 millimetres (1.4 inches), and of the internal, 43.59 millimetres (1.7 inches), showing an average difference of 7.75 millimetres (0.3 inch). In no case was the external longer than the internal condyle.

SALICYLATE OF QUININE IN RHEUMATISM.—Mr. Dearden writes to the *Lancet* of May 1, giving the following formula, which he has used with benefit for some time:

R Acidī salicylicī, ʒi;
Quinīæ bisulphatis, gr. x;
Syrupī simplicis, ʒi;
Liq. ammoniæ, fʒi;
Aquæ, ad fʒxij.

Put the acid and quinine together into a bottle with eight or nine ounces of water, shake briskly for a few seconds, let the mixture stand a little while uncorked; then add the liquor ammoniæ, again shaking; then the syrup and the rest of the water. A few drops more of the ammonia may be needed to get a clear solution.

HERPES OF THE LARYNX.—Beregszaszy reports in the *Geneskund Cour. der Nederl.* three cases of phlyctenular inflammation of the vocal cords. Laryngoscopic examination revealed the presence of small vesicles surrounded by a red zone: these vesicles transformed into pustules and were cured in a few days without any medicine. In one case there was at the same time a herpes of the pharynx: the affection had been considered as diphtheritic in its nature, but laryngoscopic examination (the patient had hoarseness at the same time) clearly revealed the nature of the affection; on the epiglottis and especially at its free border, on the ventricular bands of the larynx, and on the ary-epiglottic folds, there were small characteristic vesicles of the nature of which there could be no doubt.

SALICYLIC ACID IN DIABETES.—Schætzke (*Berlin. Klin. Wochens.*, January) gave in one case of diabetes forty-five grains of salicylic acid thrice daily. After a day or two, intolerance supervened, and the dose was reduced to fifteen grains thrice daily, which was sufficient to remove entirely the sugar from the

urine. In another case forty-five grains daily for one week and thirty grains daily for another week caused the sugar to disappear at the end of that time. In a third case, as in the two former, a curious intolerance of the drug was noticed, but thirty grains daily were taken, resulting in a speedy cure.—*Practitioner*,

OXALATE OF CERIUM IN COUGH.—In a paper on this subject by Dr. Cheeseman (*N. Y. Med. Record*, vol. i., 1880, p. 664), the following conclusions are stated to have been arrived at by a committee of the Therapeutical Society:

"1. Cerium oxalate may be given safely in doses of ten grains or more three times a day, for many days in succession.

"2. The only symptom noted from such doses is a slight dryness of the mouth for the first few days.

"3. It is probably more efficient when taken dry upon the tongue.

"4. Its effects are not fully apparent until it has been taken two or three days, and continue about the same length of time after its use is suspended.

"5. For chronic cough it is best taken on an empty stomach early in the morning and at bedtime, with other doses during the day, if required; the initial dose for an adult being five grains.

"6. It is in the majority of cases an efficient cough medicine, at least for a considerable time, and it is very valuable as an alternate with other drugs used for that purpose.

"7. It does not disturb the stomach as do opiates and most other cough remedies; but on the contrary it tends to relieve nausea and to improve digestion.

"8. The different preparations on the market are not of equal value, and when success is not obtained with one another should be substituted."

BENZOATE OF SODIUM.—The *New York Medical Record*, in answer to a correspondent, says,—

Letzterich recommends the following for internal administration:

R Sod. benzoat., gr. 80 (5.0 grms.);

Aq. dest.,

Aq. menth. pip., aa ℥ss;

Syr. aurant. cort., ℥ijss.

M. Sig.—One tablespoonful every hour for adults, a teaspoonful every hour for children less than two years old, and a dessertspoonful for children three to five years old.

Klebs advises the inhalation of ℥ijss per day at two or three sittings, conjointly with the benz. magnes. (internally), in doses varying from ℥i to ℥ij per day.

Schüller uses ℥i to ℥ij benz. sod. per day, taken by the mouth in doses of ℥ss to ℥i.

Krocak employs inhalations of a five-per-cent. aqueous solution.

Others have used and recommended a two-per-cent. watery solution, the sittings lasting at times over an hour.

The dose administered by inhalation is ℥ss at starting, with a gradual increase up to and above ℥iiss daily. Two to three inhalations are practised each day, the sittings in some instances lasting two hours (counting pauses for rest).

The minimum dose appears to be about 10 grains, the maximum ℥ss and even ℥i. —ED.

BROMIDROSIS CURED BY OLEATE OF MERCURY.—Mr. Bull writes to the *Lancet* (May 8, 1880) that in a case of bromidrosis of the axillæ, where mineral acids, German mineral waters, and Fowler's solution internally, together with the local application of carbolic acid in glycerin, extract of belladonna, tannin dissolved in spirit of wine, tincture of iodine, and unguentum diachyli, had been employed in vain, inunctions of ten per cent. oleate of mercury used nightly after washing the armpits with alcohol caused the excessive sweating to disappear and the offensive odor with it.

WATER-PADS FOR SPLINTS.—Mr. Edward C. Thompson (*British Med. Jour.*, vol. i., 1880, p. 549) has devised a series of rubber bags of various sizes, intended for use as pads for the various splints in use for fractures, etc. One of his little heel-pads, of which a picture is given, filled with air or water and placed under the heel in a box-splint or any other fracture-appliance, will prevent the patient from complaining of the slightest pain or inconvenience, no matter how long it may be necessary to keep the limb in position.

TREATMENT OF ANAL FISSURE.—Instead of employing forcible dilatation, Dr. Hamon (*Le Praticien*) applies to the fissure, with a camel's-hair brush, a solution consisting of one part of chloroform to two parts of alcohol. Two or three applications, at intervals of two or three days, usually suffice to effect a cure. The first application is very painful, but each subsequent one becomes less so.

DIABETES INSIPIDUS TREATED SUCCESSFULLY WITH ERGOT.—Dr. William Murrell (*British Med. Jour.*, May 8, 1880) again refers to this treatment. In one case, after all else had failed, half a drachm of the liquid extract of ergot every three hours reduced the urine from twenty pints to a pint and a half, and eventuated in a cure.

TREATMENT OF MUGUET ("THRUSH").—Dr. Vivier recommends the following: Distilled water, 25 grammes; alcohol, 5 grammes; corrosive sublimate, 60 centigrammes. A camel's-hair brush moistened with this solution is to be swept over the surface once, twice, or thrice daily.

IRON AND DIGITALIS.—Mr. Livy (*Brit. Med. Jour.*, *Practitioner*, 1880, p. 291) recommends the combination of tr. ferri chlor. and digitalis with dilute phosphoric acid. The acid clears up the mixture, makes it pleasanter, and acts beneficially on the stomach when mineral acids are indicated.

MISCELLANY.

DR. B. F. LAUTENBACH, who died recently, of phthisis, in this city, bade fair, had he lived, to have been one of the most famous physiologists that this country has ever produced. Although only twenty-six years of age, he had achieved a world-wide reputation as an investigator. He was almost equally fluent in French, German, and English, and could speak Italian fairly. The following comprises all of his more important papers:

1. Abstract of essay on "Hemlock and its Alkaloid." Philadelphia Medical Times, 1875.
2. Essay on "Hemlock and its Alkaloid." Proceedings of the Academy of Natural Sciences, 1876.
3. "L'Infl. de l'Irrit. d'un Nerf parcour. par un Courant constant." Archives de Physique et Hist. Nat., 1877.
4. "Difference between the Conducting and Receiving Power in Nerves." Philadelphia Medical Times, 1877.
5. "Electrical Phenomena in the Heart." Philadelphia Medical Times, 1877.
6. "On the Velocity of Nervous Action." Philadelphia Medical Times, 1877.
7. "On a New Function of the Liver." Philadelphia Medical Times, 1877.
8. "Sur les relations qui existent entre la hauteur de la contraction musculaire, l'intensité du courant irritant et la temp. latent." Archives de Physique et Hist. Nat., 1877.
9. "On the Functions of the Cerebral Lobes." American Journal of the Medical Sciences, 1877.
10. "Are there Spinal Respiratory Centres?" Philadelphia Medical Times, 1878.
11. "On the Physiology of Hemiplegia." Philadelphia Medical Times, 1878.
12. "Sur une différ. physiologique entre les Ranæ temporariæ et les Ranæ esculentæ." Bull. de la Soc. d'Hist. Nat. de Genève, 1878.
13. "Gleditschin: a New Alkaloid." Philadelphia Medical Times, 1878.
14. "On a New Manner of Determining the Presence of Sensory Nerves." New Journal of Physiology, 1879.
15. "Action of Heat on Motor Nerves." New Journal of Physiology, 1879.
16. "Saponin in its Relations to Physiology." Part I.—Local Effects. Chicago Journal of Mental and Nervous Diseases, 1879.
17. "The Action of Strychnine and Brucine on the Motor Nerves." Philadelphia Medical Times, 1879.
18. "Saponin in its Relations to Physiology." Part II.—General Effects. Chicago Journal of Mental and Nervous Diseases, 1879.
19. "Absorption without Circulation." New Journal of Physiology, 1879.
20. "The Action of Heat on Sensibility." New Journal of Physiology, 1880.
21. "On the Physiology of Writing." Philadelphia Medical Times, 1880.

In Press.

"Pflüger's Electrotonus." Smithsonian Contributions.

"New Facts respecting the Action of Strychnine on the Sensory Nerves." Pflüger's Archiv.

"On a Difference between Motor and Sensory Nerves." Pflüger's Archiv.

With Professor Schiff.

"Curare on Sensibility." Pflüger's Archiv.

PRESERVATION OF CORPSES IN THE PARIS MORGUE BY FREEZING.—A sub-committee appointed by the Prefecture of Paris have handed in a report upon this subject, which contains the following statements:

Setting out from the principle that there are grounds for rejecting all methods of preservation in which chemical substances are placed in contact with the corpse, M. Brouardel finds that putrefaction of bodies can be arrested by placing them in a medium of dry cold air. To attain this end it is desirable to allow the bodies at first to remain in a chamber at 15° or 20° under zero (C.), then to transfer them to a final place, where the temperature will be maintained under 0°.

At the autopsy, indeed, it is preferable that the cadaver should be thawed, but in some special cases (where wounds are in question, for example) the continuance of congelation may be very valuable in preserving the connections of viscera and allowing the course of any wounding instrument whatever to be followed. Of late, thanks to the prolonged lowness of temperature, M. Brouardel has been able to make several very conclusive experiments at the Morgue upon bodies which he successively congealed and thawed, the result being that the congelation did not induce in the tissues any modification capable of interfering with an examination; the blood did not rupture the vessels which contained it, and the viscera underwent no important change. Besides, freezing is a highly-prized process in histological laboratories. Nevertheless, the muscles and blood present some alterations; the discs of Bowman become dissociated, and the pale blood-globules lose their hæmoglobin, which dissolves in the blood.

If the congelation is maintained for several months, the bodies lose a tenth of their weight and the muscles have no longer the property of putrefying, as the experiments of MM. Tellier and Brouardel show. The sub-committee has adopted, for preserving by cold the bodies at the Morgue, the process of MM. Giffard and Berger. In this process the material used is atmospheric air. "Air taken outside is compressed to two or three atmospheres; during the compression the air loses a quantity of heat, which is carried away by water backing the walls of the condenser; then this air escapes from the apparatus, and in recovering its volume it undergoes a re-

frigeration, which at the point of exit may be lower than 50°." The Giffard apparatus will cost sixty thousand francs.—*Medical Press and Circular*.

ART FROM A MEDICAL STAND-POINT.—An amusing art-criticism in a recent number of the *Medical Press and Circular* contains the following judgment upon a gallery of ideal beauties contributed by famous artists to the London *Graphic*:

"We have stated that bodily as well as mental feebleness is somewhat characteristic of the *Graphic* gallery, and the statement is, we think, borne out by the prevailing wanness of complexion. Anæmia is noticeable in several faces, and emaciation in more than one. A certain sickliness accompanies the mental depression to which we have adverted. The pink on Sir Frederick Leighton's canvas is not that of health,—on the ear it creates a suspicion of eczema; and those are not the hues of robustness that glow on the cheeks of the maidens whom Messrs. Tissot, Dicksee, and Hopkins have called into being. The really painful case of bodily degeneration, however, is found within Mr. Philip Morris's silvern frame. Here we have a white-veiled girl-bride, almost corpse-like, summoning up disagreeable pathological associations. A fragile, scrofulous creature, she turns on us a wistful gaze unilluminated by any ray of hope, and seems to be taking her last farewell of all around her. Her bleared eyes, pinched nose, pallid complexion, and swollen lips indicate, it might be said, only too surely that tubercular disease has already set its seal upon her."

HOW TO DISTINGUISH NATURAL AND ARTIFICIAL BUTTER.—Dr. G. C. Wittstein, in an Austrian pharmaceutical journal, explains how to distinguish cream butter from "ox butter" by means of the microscope. Place a small piece of the butter upon an object-glass, spread it out by means of a cover-glass, and observe it under a power of three hundred to four hundred. If it is pure butter the whole field is filled with extremely fine globules, which are entirely destitute of any approach to crystalline form. If the butter is artificial, or a mixture of both, the field presents numerous angular or acicular particles between the globules. These crystalline particles are derived, no doubt, from the stearine which forms part of the beef-tallow in artificial butter. Lard does not show any such crystalline particles.

OVARIOTOMY.—Dr. Lombe Atthill (*Med. Press and Circular*, May 19) says,—

"With due care and strict attention to antiseptic precautions, the operation of ovariectomy is now deprived of its terrors and has become one of the safest in surgery; and I contend that the risk is diminished infinitely by its being undertaken at a comparatively early period.

"The value of antiseptic precautions (by

which I mean 'Lister's method') is now so generally admitted that I do not intend dwelling on it at any length. My own opinion is that in ovariectomy they should never be omitted."

DR. WILLIAM KENT GILBERT, who died of typhoid fever in this city on the 28th of June, was born December 28, 1829. For many years he had been actively engaged in practice, and at the time of his death was coroner of the city. He was a very eager and successful collector of old medical manuscripts and rare books.

NOTES AND QUERIES.

ERRATUM.

OWING to rapid chirography, our compositor made a mistake in the report of the Louisville City Hospital in our number of July 3. For Professor Wm. H. Mathew, read Professor W. H. Wathen.

THE Fourth Annual Meeting of the American Dermatological Association will be held at the Ocean House, Newport, on August 31, September 1 and 2.

ARTHUR VAN HARTLINGEN, M.D., Secretary,
129 South Fifteenth Street, Philadelphia.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM JUNE 27 TO JULY 10, 1880.

BYRNE, C. C., MAJOR AND SURGEON.—Assigned to duty as Post-Surgeon at Angel Island, Cal., relieving Assistant-Surgeon Hubbard. S. O. 93, Division of the Pacific and Department of California, July 1, 1880.

HUBBARD, VAN B., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty as Post-Surgeon at Alcatraz Island, Cal. S. O. 93, c. s., Division of the Pacific and Department of California.

BREWER, J. W., CAPTAIN AND ASSISTANT-SURGEON.—His leave of absence on account of sickness further extended three months on Surgeon's certificate of disability. S. O. 142, A. G. O., June 28, 1880.

BARTHOLOMEW, J. H., CAPTAIN AND ASSISTANT-SURGEON.—Having reported at these Headquarters, assigned to duty at Fort Cœur d'Alene, Idaho T. S. O. 103, Department of the Columbia, June 19, 1880.

KIMBALL, J. P., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for twenty-one days. S. O. 63, Department of the Platte, July 7, 1880.

WINNE, C. K., CAPTAIN AND ASSISTANT-SURGEON.—To report in person to Commanding General, Department of the East, for assignment to duty. S. O. 148, A. G. O., July 6, 1880.

DE LOFFRE, A. A., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty as Post-Surgeon, Camp on White River, Col. S. O. 144, Department of the Missouri, July 5, 1880.

COMBES, E. T., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty in Department of Texas, to proceed to Cincinnati, Ohio, and report arrival there by letter to the Surgeon-General. S. O. 148, c. s., A. G. O.

REED, W., CAPTAIN AND ASSISTANT-SURGEON.—His leave of absence extended one month. S. O. 146, A. G. O., July 6, 1880.

The following-named ASSISTANT-SURGEONS, recently appointed, will report in person to the Commanding Generals of the Departments set opposite their respective names:

R. G. EBERT, Department of the Columbia.

R. J. GIBSON, Department of the Missouri.

R. B. BENHAM, Department of Dakota.

W. C. GORGAS, Department of Texas.

NORTON STRONG, Department of the Platte.

A. W. TAYLOR, Department of the Missouri.

S. O. 149, A. G. O., July 7, 1880.